

CLAIMS:

1. A ladder filter comprising a plurality of bulk acoustic wave resonators, each bulk acoustic wave resonator comprising at least one piezoelectric layer between a bottom electrode and a top electrode, the plurality of resonators comprising in one or more filter section a plurality of series resonators in series between an input terminal and an output terminal of the filter, and one or more shunt resonators each connected between a junction between two series resonators and a common terminal, the series resonators comprising an input series resonator connected to the input terminal and an output series resonator connected to the output terminal, and wherein the shunt resonators are designed to satisfy a unity aspect ratio and wherein the series resonators are designed to satisfy an aspect ratio different from unity.
2. A ladder filter according to claim 1, wherein a filter section comprises at least two series resonators and a shunt resonator.
3. A ladder filter according to claim 1, wherein the input terminal, the output terminal, the top electrodes of the resonators together with the common terminal are arranged in a first metallization pattern with the desired widths and lengths of the resonators and terminal sizes and the resonator bottom electrodes are arranged in a second staggered fan-shaped metallization pattern, the resonator area being defined by the respective overlap of first and second metallization.
4. A ladder filter according to claim 3, wherein the widths of the series resonators w_{series} is two-thirds the widths of the shunt resonators w_{shunt} and the lengths of the series resonators l_{series} is one-and-a-half the widths of the shunt resonators w_{shunt} .

5. A radio frequency band-pass filter comprising a ladder filter as claimed in claim 1 .
6. A radio frequency receiver and/or transmitter device comprising a radio
5 band-pass filter as claimed in claim 5.